

## **Progress Report: Noxious Weed Control, Valley County, Montana**

The purpose of this report is to show the results of biological and chemical control of noxious weeds in northern Valley County, Montana.

### **Rock Creek Leafy Spurge Project**

The Bureau of Land Management (Glasgow Field Station) and the Valley County Weed District (VCWD) have had a cooperative weed management agreement since 1984. With this agreement the county provides the expertise, equipment and labor to control noxious weeds on public lands located in Valley County and the BLM reimburses the county for the expenses incurred. The four Cooperative State Grazing Districts in Valley County have been cooperating parties throughout the history of the project. Control on private and state lands have been funded by the Grazing Districts and grants.

Leafy spurge is the primary problem weed. The Rock Creek area north of Hinsdale is heavily infested, an area of some 150,000 acres involving BLM, State and private lands is infested. Within this 150,000 acre, spurge infests most drainage bottoms and is scattered in patches throughout.

In 1984 an aerial and ground spray program was started to try to contain the spread by treating the perimeter of the 150,000 acre area. Flying is an excellent method used to monitor and spot any new infestations. Beginning in 1987, leafy spurge flea beetles have been released each year within the core area. Though the first 15 years of the project, funding was very limited and control was largely ineffective.

Due to increased funding since 1999, availability of the *Apthona lacertosa* specie of flea beetles, and the benefits of GPS technology, we are now seeing positive results with the use of chemical application (Tordon/2-4D tank mix) and biological control. Our objective has been to prevent introduction and establishment of leafy spurge into non-infested land via chemical control and to gradually reduce the population of spurge in the interior area via biological control.

*Chemical Control:* In 2002, we were able to move our aerial chemical boundaries inward due to the excellent control over the last three years (see weed boundary map). The weed district continues to monitor the old weed boundary and spot spray the necessary areas. The table below shows the number of acres treated in the weed boundary.

YEAR	AERIAL ACRES TREATED (BLM & PRIVATE)	GROUND ACRES	TOTAL ACRES
2002	370	105	475
2003	360	55.5	415.5

This past spring we found South Creek, infested with leafy spurge. South Creek is 7 miles south of the Canadian border, which is the farthest north we have had found spurge. Fortunately, our helicopter was still located in Glasgow thus was able to treat the creek via air. However, the helicopter missed some areas, these areas have been documented using GPS and will be treated this fall by the Valley County Weed District. The number of ground acres is down from 2002 for 2 reasons: 1) hot and dry conditions limited spray time, 2) time was spent looking for spurge at sites treated in previous years or locating any new areas.

*Biological Control:* Cooperation between Natural Resource and Conversation Department (DNRC), Valley County Weed District, private landowners and BLM has made it possible to distribute several million insects. We feel that we are just starting to see the benefits of all the release sites that we have established. In 2003, with the assistance of the DNRC and Valley County Weed District employees we collected over 700,000 beetles. The beetles were brought back to Valley County and released on State, Federal and private lands. We continue to see the greatest success with the *A. lacertosa* beetles. The biological agents are well established. During this past summer we found flea beetles nearly everywhere there was spurge.

Our goal with the flea beetles has been to release many "super-sites" and to establish productive insectaries, so we could be self-sufficient. However, this has not yielded much success since we do not have large, continuous sections of solid spurge. On one hand we are happy and proud of past management not to have these large infestations, but this makes it hard to establish a productive insectary. We have tried releasing thousands of insects in a grid format on many sites. We monitor the site for an optimal collection time, however when we go back to the site, the insects are either not numerous or the spurge has already been eradicated.

## **FUNDING**

We have been fortunate to have adequate funding through State and Federal Grants, Valley County Grazing Districts and the BLM over the past 5 years, this contributes to the success we have had in our cooperative agreement with Valley County Weed District. The following table shows the budget since 1999.

	1999	2000	2001	2002	2003
BLM	\$41,000	\$45,000	\$45,000	\$45,700 (include July add-on of \$10,000)	\$48,000 (includes \$28,000 received from EOY02 funds)
Grazing District	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
State Grant	\$23,000	\$28,000	\$28,000	\$3,000	-----
NFWF Grant (National Fish and Wildlife Foun- dation)	-----	-----	-----	\$21,000	\$10,000
<b>TOTAL</b>	<b>\$70,000</b>	<b>\$79,000</b>	<b>\$79,000</b>	<b>\$75,000</b>	<b>\$64,000</b>

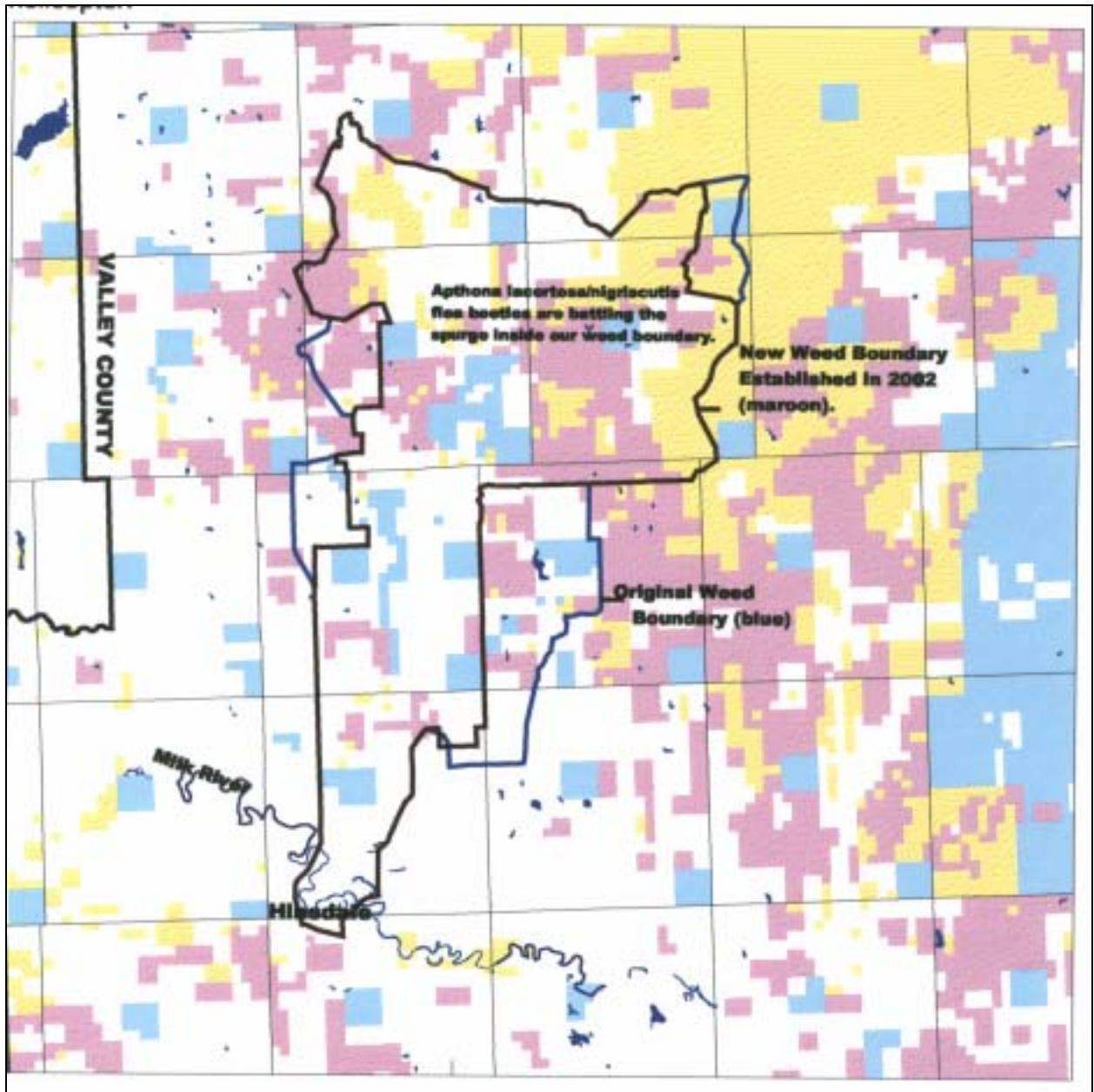
Looking ahead to next year, our funding level is somewhat uncertain. We have very little carry-over in operation funds from 2003 and all chemical will be used by the end of the spraying season. Glasgow Field Station was able to use 2003 year-end funds of \$6900 to purchase

chemical for the county. This fall the county will re-apply for the NFWF grant. For fiscal year 2004 we have requested \$20,000 through the Budget Planning System (BPS) to fly the remote breaks along Fort Peck Lake to look for new patches of salt cedar, knapweed and leafy spurge.

### **CHERRY CREEK KNAWEED PROJECT**

Knapweed infestations are located north of Glasgow in the Cherry Creek and St. Marie area and south of Glasgow along the TC Access Road. BLM has contributed \$2500 to this project for the past 3 consecutive years. The county is using chemical and biological agents to control this weed and feel they are getting good control. In 2001 and 2002 about 60 acres of knapweed was treated. In 2003 there was only 45 acres treated, more time was spent on monitoring and looking for new infestations.

In conclusion, we are achieving our objectives in controlling leafy spurge and knapweed in Valley County. This success could not of been achieved without the cooperation of the Valley County Weed District, State and Federal Agencies, Valley County Grazing Districts, and private landowners. We all know weeds do not know fence lines or land ownership therefore, we are all in this battle together, no matter who owns or manages the land.



The map shows the original weed boundary (blue line) sprayed from 1998 to 2001 and the current boundary sprayed in 2002-2003 (maroon line) in the Rock Creek area.

**LAND STATUS:**

Pink – BLM  
 Yellow – BLM  
 Blue – State  
 White – Private



The following before and after photographs are taken inside of the spray boundary. These pictures show the success we seeing using biological as a control method.







